

## **IN THE CLAIMS:**

1. (Previously Presented) A method for logically provisioning resources in a data processing system, said method comprising the steps of:

receiving a request for a set of resources in a plurality of resources in a provisioning environment within the data processing system, wherein each resource in said set of resources is one of a plurality of different types of resources, wherein said plurality of different types of resources comprises hardware elements and software elements;

associating a current state variable and a shared state variable with each one of said plurality of resources, wherein the current state variable indicates whether the each one of said plurality of resources is available, in a process of being reserved, or reserved, and wherein the shared state variable indicates whether the each one of said plurality of resources is a shared resource;

selecting a particular instance of a resource in said set of resources of said plurality of resources from a group of unassigned available resources of said plurality of different types of resources;

indicating that said selected particular instance is in the process of being reserved utilizing the current state variable, wherein said selected particular instance is unavailable for selection after indicating that said selected particular instance is in the process of being reserved, wherein said selected particular instance is unavailable for selection by another request prior to provisioning said selected particular instance, and wherein a selection is prevented of any of said plurality of resources having an indication of in the process of being reserved;

logically provisioning said selected particular instance to fulfill the request by establishing logical relationships between said selected particular instance and other resources; and

responsive to logically provisioning said selected particular instance to fulfill the request, indicating whether the each one of said plurality of resources is reserved utilizing the current state variable, wherein a reserved resource has an established logical

relationship with said provisioning environment and said reserved resource's shared state variable indicates said reserved resource is not a shared resource.

2. (Original) The method according to claim 1, further comprising the steps of:  
identifying other ones of said plurality of resources that said selected particular instance requires for use.
3. (Previously Presented) The method according to claim 2, further comprising the steps of:  
selecting a particular instance for each of said other ones from a group of unassigned available resources of said plurality of different types of resources that said selected particular instance requires for use; and  
logically provisioning said selected particular instance for each of said other ones to fulfill a request by establishing logical relationships between each of said other ones.
4. (Canceled)
5. (Original) The method according to claim 1, further comprising the steps of:  
said group of unassigned available resources including no preassigned logical associations with any other one of said plurality of resources.
- 6.-8. (Canceled)
9. (Original) The method according to claim 1, further comprising the steps of:  
creating a topology for said provisioning environment, said topology including a layout of said plurality of different types of resources; and  
said layout defining relationships among said plurality of different types of resources.

10. (Original) The method according to claim 9, further comprising the steps of:  
utilizing said relationships defined by said layout to identify other ones of said plurality of resources that said selected particular instance requires for use.
11. (Original) The method according to claim 10, further comprising the steps of:  
determining other ones of said plurality of resources that are to be associated with said particular instance.
12. (Original) The method according to claim 10, further comprising the steps of:  
determining other ones of said plurality of resources that depend on said particular instance.
- 13.-36. (Canceled)
37. (Previously Presented) The method according to claim 1, wherein the request comprises a list of previously reserved resources to be used to satisfy the request.
- 38.-39. (Canceled)
40. (New) A computer program product in a computer readable storage medium for logically provisioning resources, said computer program product comprising:  
computer usable program code stored in the computer readable storage medium, wherein the computer usable program code is adapted to cause a processor in a computer to perform steps comprising:  
receiving a request for a set of resources in a plurality of resources in a provisioning environment within the data processing system, wherein each resource in said set of resources is one of a plurality of different types of resources, wherein said plurality of different types of resources comprises hardware elements and software elements;  
associating a current state variable and a shared state variable with each one of said plurality of resources, wherein the current state variable indicates whether the each

one of said plurality of resources is available, in a process of being reserved, or reserved, and wherein the shared state variable indicates whether the each one of said plurality of resources is a shared resource;

selecting a particular instance of a resource in said set of resources of said plurality of resources from a group of unassigned available resources of said plurality of different types of resources;

indicating that said selected particular instance is in the process of being reserved utilizing the current state variable, wherein said selected particular instance is unavailable for selection after indicating that said selected particular instance is in the process of being reserved, wherein said selected particular instance is unavailable for selection by another request prior to provisioning said selected particular instance, and wherein a selection is prevented of any of said plurality of resources having an indication of in the process of being reserved;

logically provisioning said selected particular instance to fulfill the request by establishing logical relationships between said selected particular instance and other resources; and

responsive to logically provisioning said selected particular instance to fulfill the request, indicating whether the each one of said plurality of resources is reserved utilizing the current state variable, wherein a reserved resource has an established logical relationship with said provisioning environment and said reserved resource's shared state variable indicates said reserved resource is not a shared resource.

41. (New) The computer program product according to claim 40, further comprising: identifying other ones of said plurality of resources that said selected particular instance requires for use.

42. (New) The computer program product according to claim 41, further comprising: selecting a particular instance for each of said other ones from a group of unassigned available resources of said plurality of different types of resources that said selected particular instance requires for use; and

logically provisioning said selected particular instance for each of said other ones to fulfill a request by establishing logical relationships between each of said other ones.

43. (New) The computer program product according to claim 40, further comprising: said group of unassigned available resources including no preassigned logical associations with any other one of said plurality of resources.

44. (New) The computer program product according to claim 40, further comprising: creating a topology for said provisioning environment, said topology including a layout of said plurality of different types of resources; and said layout defining relationships among said plurality of different types of resources.

45. (New) The computer program product according to claim 44, further comprising: utilizing said relationships defined by said layout to identify other ones of said plurality of resources that said selected particular instance requires for use.

46. (New) The computer program product according to claim 45, further comprising: determining other ones of said plurality of resources that are to be associated with said particular instance.

47. (New) The computer program product according to claim 45, further comprising: determining other ones of said plurality of resources that depend on said particular instance.

48. (New) The computer program product according to claim 40, wherein the request comprises a list of previously reserved resources to be used to satisfy the request.

49. (New) An apparatus for logically provisioning resources, said apparatus comprising:

a processor, and instructions stored in a memory, wherein the instructions are adapted to cause the processor to perform a plurality of steps comprising:

receiving a request for a set of resources in a plurality of resources in a provisioning environment within the data processing system, wherein each resource in said set of resources is one of a plurality of different types of resources, wherein said plurality of different types of resources comprises hardware elements and software elements;

associating a current state variable and a shared state variable with each one of said plurality of resources, wherein the current state variable indicates whether the each one of said plurality of resources is available, in a process of being reserved, or reserved, and wherein the shared state variable indicates whether the each one of said plurality of resources is a shared resource;

selecting a particular instance of a resource in said set of resources of said plurality of resources from a group of unassigned available resources of said plurality of different types of resources;

indicating that said selected particular instance is in the process of being reserved utilizing the current state variable, wherein said selected particular instance is unavailable for selection after indicating that said selected particular instance is in the process of being reserved, wherein said selected particular instance is unavailable for selection by another request prior to provisioning said selected particular instance, and wherein a selection is prevented of any of said plurality of resources having an indication of in the process of being reserved;

logically provisioning said selected particular instance to fulfill the request by establishing logical relationships between said selected particular instance and other resources; and

responsive to logically provisioning said selected particular instance to fulfill the request, indicating whether the each one of said plurality of resources is reserved utilizing the current state variable, wherein a reserved resource has an established logical relationship with said provisioning environment and said reserved resource's shared state variable indicates said reserved resource is not a shared resource.

50. (New) The apparatus according to claim 49, further comprising:  
identifying other ones of said plurality of resources that said selected particular instance requires for use.
51. (New) The apparatus according to claim 50, further comprising:  
selecting a particular instance for each of said other ones from a group of unassigned available resources of said plurality of different types of resources that said selected particular instance requires for use; and  
logically provisioning said selected particular instance for each of said other ones to fulfill a request by establishing logical relationships between each of said other ones.
52. (New) The apparatus according to claim 49, further comprising:  
said group of unassigned available resources including no preassigned logical associations with any other one of said plurality of resources.
53. (New) The apparatus according to claim 49, further comprising:  
creating a topology for said provisioning environment, said topology including a layout of said plurality of different types of resources; and  
said layout defining relationships among said plurality of different types of resources.
54. (New) The apparatus according to claim 53, further comprising:  
utilizing said relationships defined by said layout to identify other ones of said plurality of resources that said selected particular instance requires for use.
55. (New) The apparatus according to claim 54, further comprising:  
determining other ones of said plurality of resources that are to be associated with said particular instance.

56. (New) The apparatus according to claim 54, further comprising:  
determining other ones of said plurality of resources that depend on said particular instance.
57. (New) The apparatus according to claim 49, wherein the request comprises a list of previously reserved resources to be used to satisfy the request.